Mini Series

User Manual

Version 1.0
Published July 2013
Copyright©2013 ASRock INC. All rights reserved.

Copyright Notice:

No part of this manual may be reproduced, transcribed, transmitted, or translated in any language, in any form or by any means, except duplication of documentation by the purchaser for backup purpose, without written consent of ASRock Inc.
Products and corporate names appearing in this manual may or may not be registered trademarks or copyrights of their respective companies, and are used only for identification or explanation and to the owners' benefit, without intent to infringe.

Disclaimer:

Specifications and information contained in this manual are furnished for informational use only and subject to change without notice, and should not be constructed as a commitment by ASRock. ASRock assumes no responsibility for any errors or omissions that may appear in this manual.
With respect to the contents of this manual, ASRock does not provide warranty of any kind, either expressed or implied, including but not limited to the implied warranties or conditions of merchantability or fitness for a particular purpose.
In no event shall ASRock, its directors, officers, employees, or agents be liable for any indirect, special, incidental, or consequential damages (including damages for loss of profits, loss of business, loss of data, interruption of business and the like), even if ASRock has been advised of the possibility of such damages arising from any defect or error in the manual or product.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

CALIFORNIA, USA ONLY
The Lithium battery adopted on this product contains Perchlorate, a toxic substance controlled in Perchlorate Best Management Practices (BMP) regulations passed by the California Legislature. When you discard the Lithium battery in California, USA, please follow the related regulations in advance.
"Perchlorate Material-special handling may apply, see www.dtsc.ca.gov/hazardouswaste/perchlorate"

ASRock Website: http://www.asrock.com

Safety instructions

Your system is designed and tested to meet the latest standards of safety for information technology equipment. However, to ensure your safety, it is important that you read the following safety instructions.

Setting up your system

- Read and follow all instructions in the documentation before you operate your system.
- Do not use this product near water or a heated source such as a radiator.
- Set up the system on a stable surface.
- Openings on the chassis are for ventilation. Do not block or cover these openings. Make sure you leave plenty of space around the system for ventilation. Never insert objects of any kind into the ventilation openings.
- Use this product in environments with ambient temperatures between 0° C and 40° C.
- If you use an extension cord, make sure that the total ampere rating of the devices plugged into the extension cord does not exceed its ampere rating.

Care during use

- Do not walk on the power cord or allow anything to rest on it.
- Do not spill water or any other liquids on your system.
- When the system is turned OFF, a small amount of electrical current still flows. Always unplug all power, modem, and network cables from the power outlets before cleaning the system.
- If you encounter the following technical problems with the product, unplug the power cord and contact a qualified service technician or your retailer.
    - The power cord or plug is damaged.
    - Liquid has been spilled into the system.
    - The system does not function properly even if you follow the operating instructions.
    - The system was dropped or the cabinet is damaged.
    - The system performance changes.

No disassembly

NOTE:
The warranty does not apply to products (including HDD, ODD, memory and warranty seal) that have been damaged as a result of attempting to disassemble/reassemble the system or modifying the hardware configuration.

Safety cautions and warnings

Optical Drive Safety Information

Optical drives sold with this system contains a CLASS 1 LASER PRODUCT.

CAUTION:

Invisible laser radiation when open. Do not stare into beam or view directly with optical instruments.

WARNING:

Making adjustments or performing procedures other than those specified in the user's manual may result in hazardous laser exposure. Do not attempt to disassemble the optical drive. For your safety, have the optical drive serviced only by an authorized service provider.

Product disposal notice

IMPORTANT:

This symbol of the crossed out wheeled bin indicates that the product (electrical and electronic equipment) should not be placed in municipal waste. Check local regulations for disposal of electronic products.

Nordic Lithium Cautions (for lithium-ion batteries)

CAUTION!

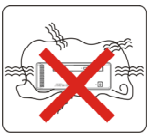
Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

Installation Notices

Do not place this product underneath heavy loads or in an unstable position.

Do not use or expose this product around magnetic fields as magnetic interference may affect the performance of the product.

Do not expose this product to high levels of direct sunlight, high-humidity or wet conditions.



Do not block the air vents to this product or impede the airflow in any way.

Contents

1 Introduction 7

1.1 Package Contents 7

1.2 Specifications 8

1.3 Motherboard Layout 10

1.4 Rear Panel 12

1.5 System Chassis 13

1.6 Remote Controller 14

2 Quick Installation 15

3 Reinstalling the ODD/HDD 18

4 Installing the Second HDD 20

5 Dual Monitor 22

6 Driver Installation 23

7 Utility Menu 24

7.1 Instant Boot 24

7.1.1 Introduction 24

7.1.2 Installation 25

7.2 Symantec Norton AntiVirus Software free bundle (Trial version) 28

7.3 ASRock APP Charger 29

7.4 CyberLink MediaEspresso 6.5 (Trial version) 30

7.5 ASRock XFast RAM 31

7.6 ASRock XFast USB 34

7.7 ASRock XFast LAN 37

7.8 Other Unique Features 41

8 UEFI SETUP UTILITY 43
8.1 Introduction 43
8.1.1 UEFI Menu Bar 43
8.1.2 Navigation Keys 44
8.2 Main Screen 45
8.3 OC Tweaker Screen 46
8.4 Advanced Screen 48
8.4.1 CPU Configuration 49
8.4.2 North Bridge Configuration 50
8.4.3 South Bridge Configuration 51
8.4.4 Storage Configuration 52
8.4.5 Super IO Configuration 53
8.4.6 ACPI Configuration 54
8.4.7 USB Configuration 56
8.5 Tool 57
8.6 Hardware Health Event Monitoring Screen 59
8.7 Boot Screen 60
8.8 Security Screen 62
8.9 Exit Screen 63
9 Software Support 64
9.1 Installing an Operating System 64
9.2 Support CD Information 64
9.2.1 Running Support CD 64
9.2.2 Drivers Menu 64
9.2.3 Utilities Menu 64
9.2.4 Contact Information 64

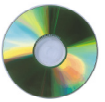
Chapter 1 Introduction

Thank you for purchasing ASRock ***Mini Series***, a reliable product produced under ASRock's consistently stringent quality control. It delivers excellent performance with robust design conforming to ASRock's commitment to quality and endurance.

Because the hardware specifications and the BIOS software might be updated, the content of this manual will be subject to change without notice. In case any modifications of this manual occur, the updated version will be available on ASRock website without further notice. You may find the latest VGA cards and CPU support lists on ASRock's website as well.
http://www.asrock.com
If you require technical support related to this product, please visit our website for specific information about the model you are using. www.asrock.com/support/index.asp

1.1 Package Contents

ASRock ***Mini Series***



Support CD

Quick Start Guide

AC Power Cord

One AC/DC Adapter

Anti-Slip Pad

Remote Controller

SATA and Power Cables

1.2 Specifications

* For barebone systems, the HDD, ODD or Memory may not be included.

Processor	AMD E2-1800 APU
Chipset	AMD A68M Chipset
Memory	Supports DDR3 1333/1066MHz, 2 x SO-DIMM slots, maximum up to 16GB
Display	Integrated AMD Radeon™ HD7340M Graphics
Storage	Supports up to two 2.5” SATA HDDs and RAID 0/1
LAN	Gigabit LAN
Front I/O	2 x USB 3.0, 1 x MIC, 1 x Headphone
Rear I/O	1 x HDMI, 1 x DVI-D, 1 x D-Sub VGA, 6 x USB 2.0, 1 x S/PDIF
Audio	7.1 Ch HD Audio
ODD	DVD Super Multi
WiFi	802.11 b/g/n wireless LAN
Bluetooth	Bluetooth 4.0/3.0 HS class II
Controller	MCE Remote Controller
Power	65W/19V Adapter
Dimension	195mm(W) x 70mm(H) x 186mm(L)
Volume	2.5L

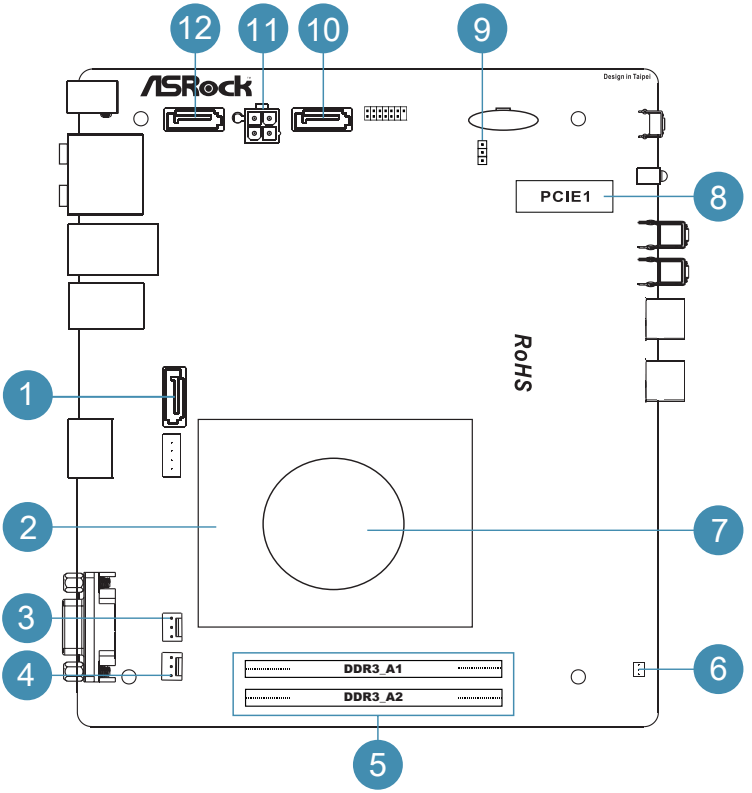
Free bundle software:

1. Symantec Norton AntiVirus Software (Trial version)
2. CyberLink MediaEspresso 6.5 (trial version)
3. ASRock XFast LAN, XFast RAM, XFast USB

WARNING

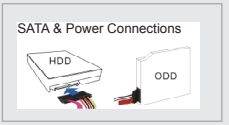
Please realize that there is a certain risk involved with overclocking, including adjusting the setting in the BIOS, applying Untied Overclocking Technology, or using third-party overclocking tools. Overclocking may affect your system's stability, or even cause damage to the components and devices of your system. It should be done at your own risk and expense. We are not responsible for possible damage caused by overclocking.

1.3 Motherboard Layout

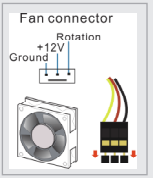


1. SATA 3.0 connector: For the HDD's SATA data cable
2. Heatsink
3. Fan connector
4. Fan connector
5. Memory sockets
6. Infrared module header
7. CPU Fan
8. Mini-PCI Express expansion slot: For the WiFi module
9. Clear CMOS jumper
10. SATA 3.0 connector: For the ODD's SATA data cable
11. ATX5V output power connector for slim ODD & 2.5" HDD
12. SATA 3.0 connector: For the HDD's SATA data cable

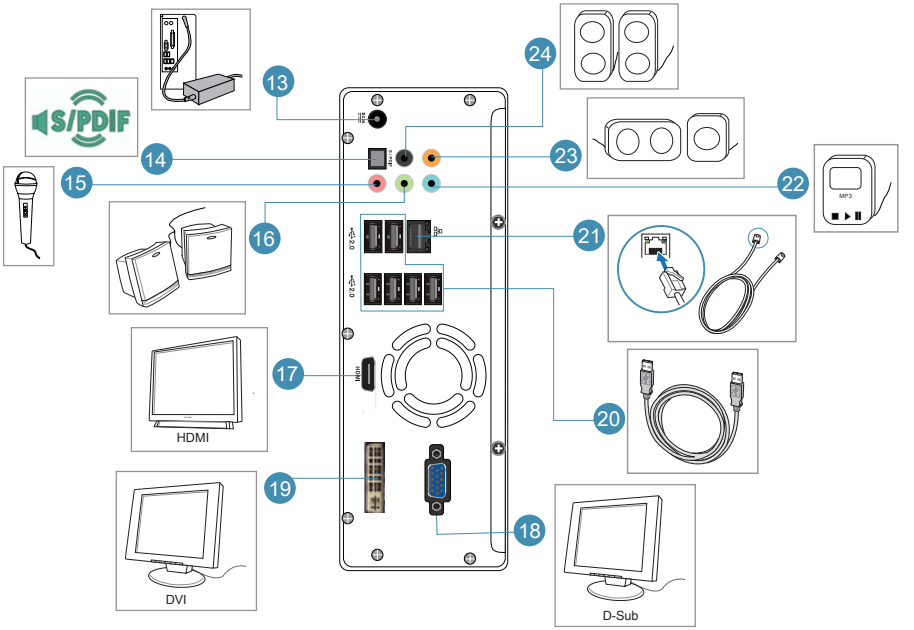
1. SATA and Power Connections



2. Fan Connection



1.4 Rear Panel



13. DC-In jack
14. Optical S/PDIF Out port
15. Mic In (Pink): Microphone
16. Front L/R Out (Lime): Stereo speakers or headphones
17. HDMI connector
18. VGA connector
19. DVI connector
20. USB 2.0 ports: USB devices
21. RJ-45 LAN port: Local Area Network
22. Line In (Blue) for 2/4/6 channel; Rear (Blue) for 8 channel
23. Center/LFE (Orange): Center / Subwoofer speakers
24. Side port for side speakers

1.5 System Chassis

25. Optical Disc Drive
26. Power ON/OFF button with status indicator
27. Drive activity indicator
28. Headphone port
29. Microphone port
30. USB 3.0 ports: USB devices
31. Infrared receiver

1.6 Remote Controller

NAVIGATION BUTTONS

START OK BACK Information

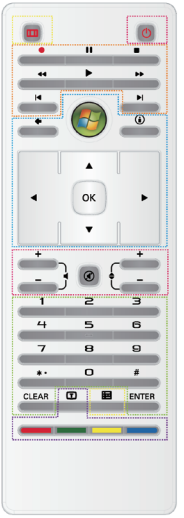
UP DOWN LEFT RIGHT

SHORTCUT BUTTONS

GUIDE ZOOM

AV AND POWER BUTTONS

POWER VOLUME UP/ DOWN CHANNEL UP/ DOWN MUTE



PLAYBACK BUTTONS

RECORD PAUSE STOP

REWIND PLAY FAST SKIP BACK SKIP FORWARD

NUMERIC KEYPAD

1 2 3 4 5 6 CLEAR

7 8 9 * 0 # ENTER

The numeric keypad consists of numbers from 0 through 9 and two other keys: ENTER and CLEAR.

TELETEXT BUTTONS

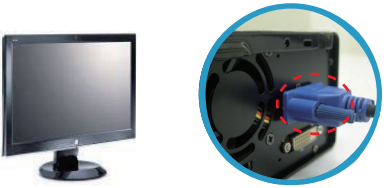
Media Center supports Teletext when it is available. The colored Fastext buttons on the remote control for Media Center PC work much like the Teletext buttons on a standard Teletext-enabled TV.

Some remote controller functions listed above are only available with the relative hardware equipments. If the hardware equipments you adopt are not compatible with the system, you are not allowed to use these functions. This product is designed to meet MCE standards.

Chapter 2 Quick Installation

1. Connecting USB Devices to the USB2.0 Ports.

2. Connecting a VGA Monitor to the VGA Port.



3. Connecting the Network with the RJ-45 LAN Port.

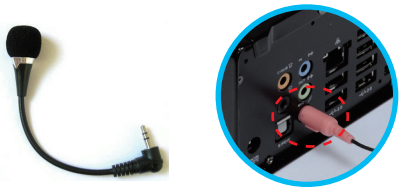
4. Connecting an HDMI Device to the HDMI Port.

5. Connecting a DVI Device to the DVI Port.

6. Connecting an External Audio Device. (Line In Port for 2/4/6 Channel; Rear Port for 8 Channel)

7. Connecting Stereo Speakers or Headphones. (Front L/R Out Port)

8. Connecting a Microphone. (Mic In Port)

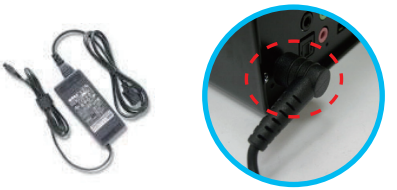


9. Connecting Center / Subwoofer Speakers. (Center/LEF Port)

10. Connecting Side Speakers. (Side Port for 4/6/8 Channel)

11. Connecting an Optical Device to the Optical S/PDIF Out Port.

12. Connecting Power to the DC-In Jack.



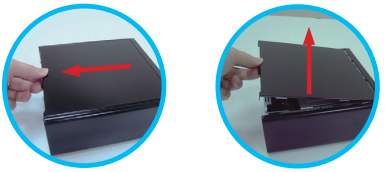
13. Powering on the System.

14. Connecting Headphones / Microphones / USB3.0 Devices

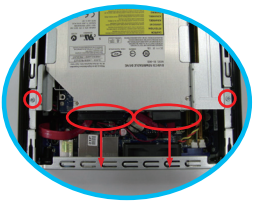
Chapter 3 Reinstalling the ODD/HDD

1. Remove the cover screws on the rear panel. (For safety reasons, please ensure that the power cord is disconnected before opening the case.

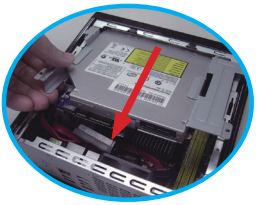
2. Slide the side cover toward the rear panel and pull the side cover upwards.



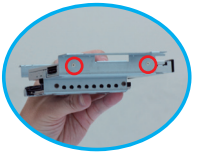
3. To change the storage drives, you need to remove the SATA and power cables from the ODD / HDD first, then unscrew the screws from both sides.

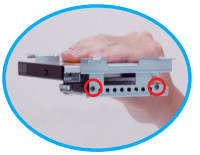


4. Pull the ODD / HDD rack backwards and take it out from the bay.



5. Unscrew the screws from the side of the ODD / HDD rack, and change your required ODD / HDD.

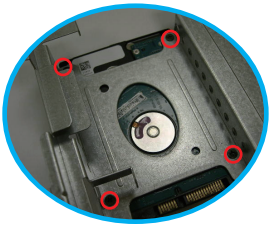




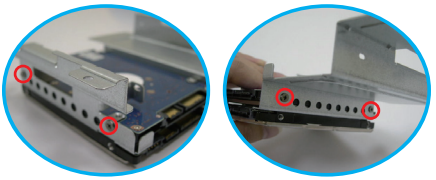
6. Refer to the steps above to place the new ODD / HDD to the chassis. Replace the side cover and fasten the screws.

Chapter 4 Installing the Second HDD

1. Please follow steps 1 to 4 above, and remove the ODD and the first HDD in advance. Then fasten the screws of the second HDD to the rack.

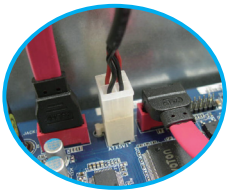


2. Place the first HDD to the rack and fasten the screws from both sides.

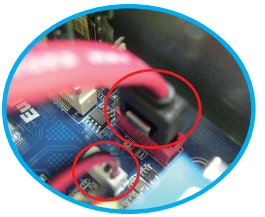


3. Place the ODD to the rack and fasten the screws from both sides. Replace the rack to the chassis.

4. Connect the SATA and power cables to the ODD and the bottom HDD.



5. Connect the other SATA and power cables to SATA3_1 and J1 connectors on the motherboard.



6. Connect the other end to the top HDD.

7. Replace the side cover and fasten the screws.

Chapter 5 Dual Monitor

With the internal VGA output which supports DVI-D, HDMI and D-Sub, you can enjoy dual monitor on your ASRock Mini series HTPC.
ASRock Mini series HTPC also provides independent display controllers for DVI-D, HDMI and D-Sub to support dual VGA output so that DVI-D, HDMI and D-Sub can drive the same or different display contents simultaneously.

To enable dual monitor, please connect monitor cables to the respective ports on the I/O panel.

If you have already installed the VGA driver from our support CD to your system, you can enjoy dual monitor after your system reboots. If you haven't installed the VGA driver yet, please install the VGA driver from our support CD and restart your computer.

HDMI, DVI and D-Sub monitors cannot all be enabled at the same time. You can only choose two of them.

Chapter 6 Driver Installation

To install the drivers to your system, please insert the support CD to your optical drive first. Then, the drivers compatible to your system can be auto-detected and listed on the support CD driver page. Please follow the order from top to bottom to install those required drivers. Therefore, the drivers you install will work properly.

Chapter 7 Utility Menu

The utility menu shows the applications and other software that this product supports.

7.1 Instant Boot

7.1.1 Introduction

Instant Boot, a user-friendly tool that allows you to turn on your PC in just a few seconds, provides a much more efficient way to save energy, time, money, and improves the system's running speed *. It is applicable to Windows® 8 / 8 64-bit / 7 / 7 64-bit / XP / XP 64-bit.

Instant Boot leverages the S3 and S4 ACPI (Advanced Configuration and Power Interface) features which normally enables the Sleep/ Standby and Hibernation modes in Windows® to shorten boot time. By calling S3 and S4 at specific times during the shutdown and startup process, Instant Boot allows you to enter your Windows® desktop in a few seconds.

There are two modes of Instant Boot available: Fast Mode and Regular Mode. In Fast Mode, it uses S3 and takes only a few seconds for the OS to resume to working state, which is 10 times faster than the traditional boot time (50 to 60 seconds). Even the Regular Mode is 3 times faster than the traditional boot time.

Instant Boot guarantees a clean Windows® boot to consume less power, time and money without any accumulated garbage data, and you can still keep your data safe even when the power is cut off. Also, Windows® update speed will become faster.

* This function is applicable ONLY to individuals that do not secure ID and Password to their systems.
* The boot time depends on hardware configuration.

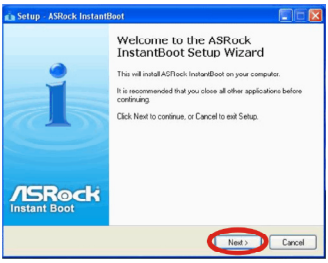
7.1.2 Installation

Please read the procedures below carefully before you install Instant Boot.

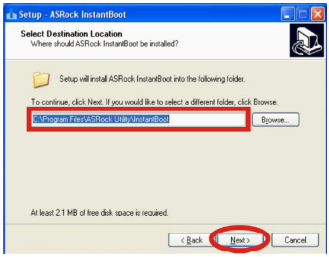
A. Install Instant Boot driver from ASRock's support CD, or you may click the following link to get the latest utility and BIOS: http://www.asrock.com/feature/InstantBoot/download.asp

B. Execute the Instant Boot installation program under Windows®. Please follow the instructions on Instant Boot's setup page.

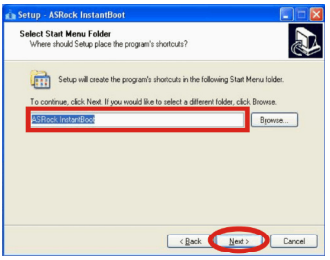
a. Click "Next" to continue.


Setup - ASRock InstantBoot
Welcome to the ASRock InstantBoot Setup Wizard
This will install ASRock InstantBoot on your computer.
It is recommended that you close all other applications before continuing.
Click Next to continue, or Cancel to exit Setup.
ASRock
Instant Boot
Next >
Cancel

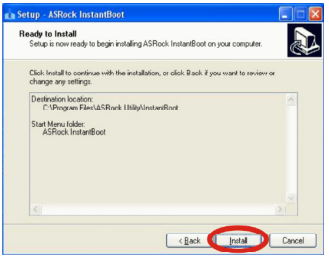
b. Select a location. You may choose a different folder if you want to. Then click "Next".


Setup - ASRock InstantBoot
Select Destination Location
Where should ASRock InstantBoot be installed?
Setup will install ASRock InstantBoot into the following folder.
To continue, click Next. If you would like to select a different folder, click Browse.
Browse...
At least 2.1 MB of free disk space is required.
< Back
Next >
Cancel

c. Create a start menu folder. You may choose a different folder if you want to. Then click "Next".


Setup - ASRock InstantBoot
Select Start Menu Folder
Where should Setup place the program's shortcuts?
Setup will create the program's shortcuts in the following Start Menu folder.
To continue, click Next. If you would like to select a different folder, click Browse.
ASRock InstantBoot
Browse...
< Back
Next >
Cancel

d. Click “Install” to begin installing Instant Boot driver.


Setup - ASRock InstantBoot
Ready to Install
Setup is now ready to begin installing ASRock InstantBoot on your computer.
Click Install to continue with the installation, or click Back if you want to review or change any settings.
Destination location:
C:\Program Files\ASRock Utility\InstantBoot
Start Menu folder:
ASRock InstantBoot
< Back
Install
Cancel

e. Click “Finish” to complete and exit the setup.

Setup - ASRock InstantBoot
Completing the ASRock InstantBoot Setup Wizard
Setup has finished installing ASRock InstantBoot on your computer. The application may be launched by selecting the installed icons.
Click Finish to exit Setup.
Launch ASRock InstantBoot
ASRock
Instant Boot
Finish

C. After the installation is completed, you will find an ASRock Instant Boot icon

on Windows® desktop.

D. Double click ASRock Instant Boot’s icon on the desktop, then Instant Boot’s main menu will pop up.

E. On Instant Boot's main menu, you can choose "Fast Mode", "Regular Mode" or "Disable Instant Boot". After that, please click "Apply" to save your changes. Please notice that you need to keep the AC power on if you select "Fast Mode".

F. When you want to shut down the computer, please select "Shut Down" from Windows® "Start menu".

G. The system will restart automatically. After entering into the OS the system will shutdown again.

H. Next time when you turn on your system, you can enjoy Instant Boot.

7.2 Symantec Norton AntiVirus Software free bundle (Trial version)

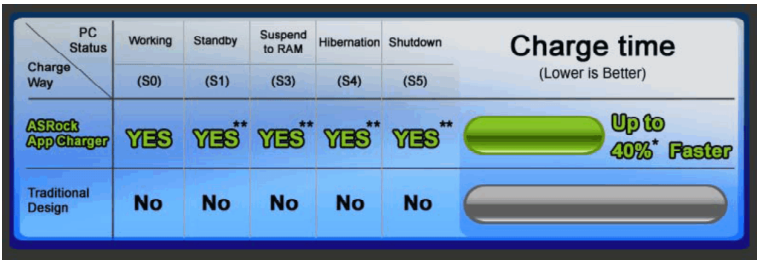
Protect your PC with Norton Internet Security, the fastest virus, spyware, Internet protection. Norton Internet Security can stop online identity theft, viruses, spyware, bots and more. Stop attacks before they get on your PC, deliver clear threat and performance explanations, identify unsafe web sites right in your search results, and use intelligence-driven Norton Insight Network for faster, fewer, shorter scans.

7.3 ASRock APP Charger

Setup - ASRock App Charger
Fast Charge & Charge Anytime
ASRock App Charger
Welcome to the ASRock App Charger Setup Wizard
This will install ASRock App Charger v1.0.1 on your computer.
It is recommended that you close all other applications before continuing.
Click Next to continue, or Cancel to exit Setup.
Next >
Cancel

Fast Charge & Charge Anytime!

If you desire a faster, less restricted way of charging your Apple devices, such as an iPhone/iPad/iPod Touch, ASRock has prepared a wonderful solution for you - ASRock App Charger. Simply by installing the App Charger driver makes your iPhone charge much quicker from your computer and up to 40% faster than before. ASRock App Charger allows you to quickly charge many Apple devices simultaneously and even supports continuous charging when your PC enters into Standby mode (S1), Suspend to RAM(S3), hibernation mode (S4) or power off (S5).



7.4 CyberLink MediaEspresso 6.5 (Trial version)

CyberLink MediaEspresso
CyberLink
MediaEspresso
Feature:
Supports new Intel Quick Sync Video hardware transcoding
- Ultra fast media converter with hardware acceleration support for AMD Accelerated Parallel Processing and NVIDIA CUDA technology
- Transfer converted files directly to portable devices with Smart Detect and Direct Sync
- Enhance standard video quality instantly with TrueTheater HD
- Complete solution for media transcoding; includes videos, music and photos!
Share media directly to Facebook and YouTube
You have 30 day(s) of free evaluation left.
Buy Now
Try Now

CyberLink MediaEspresso 6.5 trial now supports Intel® Quick Sync Video hardware transcoding and is optimized for second generation Core i7, i5, and i3 processors to accelerated conversion of all your favorite media files for your favorite portable players. Now you can easily display your favorite movies, songs and photos on iPhone, iPad, PSP, XBox, Youtube, Facebook etc. Compile, convert and enjoy images and songs as much as you want and enhance your videos to new levels with TrueTheater Technology. Try it today!

Limitations:
30-day trial limitation
Convert videos to the H.264 format 50 times

7.5 XFast RAM

ASRock XFast RAM is a new function that is included in ASRock Extreme Tuning Utility (AXTU). It fully utilizes the memory space that cannot be used under Windows® 32-bit OS. ASRock XFast RAM shortens the loading time of previously visited websites, making web surfing faster than ever. And it also boosts the speed of Adobe Photoshop 5 times faster. Another advantage of ASRock XFast RAM is that it reduces the frequency of accessing your SSDs or HDDs in order to extend their lifespan.

XFast RAM Settings

You may find the XFast RAM setup page in the left panel of ASRock Extreme Tuning utility.

First select the desired drive and disk size to create a virtual drive.

To access more than 4GB of RAM in Windows® 32-bit OS, please leave PAE mode set to ON.

In the options section, users may enable and assign the size of a partition for Ready Boost if they're using a 32-bit OS. We suggest setting the size of Ready Boost one to three times larger than your RAM for optimized performance.

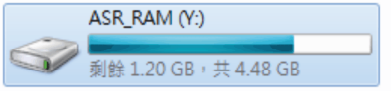
Normally, when the memory being used by all the existing processes exceeds the available RAM, the operating system moves pages (4-KB pieces) of one or more virtual address spaces to the computer's hard disk. By enabling Memory Pagefile, the system puts the pages into the virtual

drive instead of the hard disk drive to accelerate performance speed.

Lastly, select the files that are supposed to go in the virtual drive to speed up the system's performance. Such as temporary files created by computer programs when they cannot allocate enough memory for its tasks. Or internet cache files including html, images, Cascading Style Sheets and JavaScript scripts from IE, Firefox and Google Chrome.

Click Backup XFast RAM if you wish to make a backup. Then click on the APPLY button to activate XFast RAM. Click on STOP if you wish to deactivate XFastRAM.

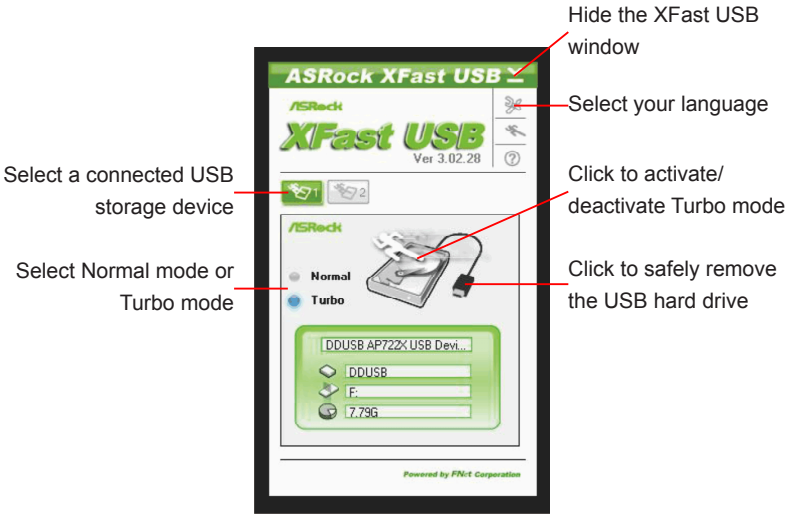
The virtual disk will appear once you restart the system.



7.6 ASRock XFast USB

Not only does ASRock XFast USB boost up the performance of USB 2.0 storage devices, but also USB 3.0 devices. Users may experience up to five times faster USB data transfer speed!

XFast USB UI overview

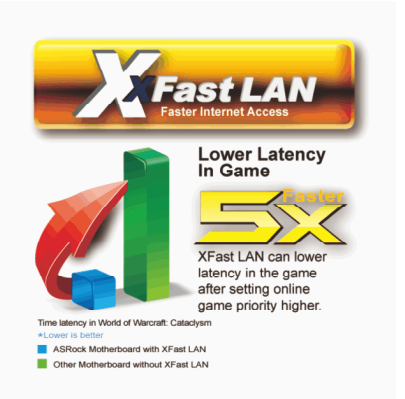


Plug in your USB storage device and XFast USB automatically sets it to Turbo mode!

D. Then, you will see ASRock XFast USB user interface as below. You can also double-click the “XFast USB” icon to show this interface. Please choose “Turbo” to enable ASRock XFast USB Technology. The detailed information of your USB device can also be found in this user interface.

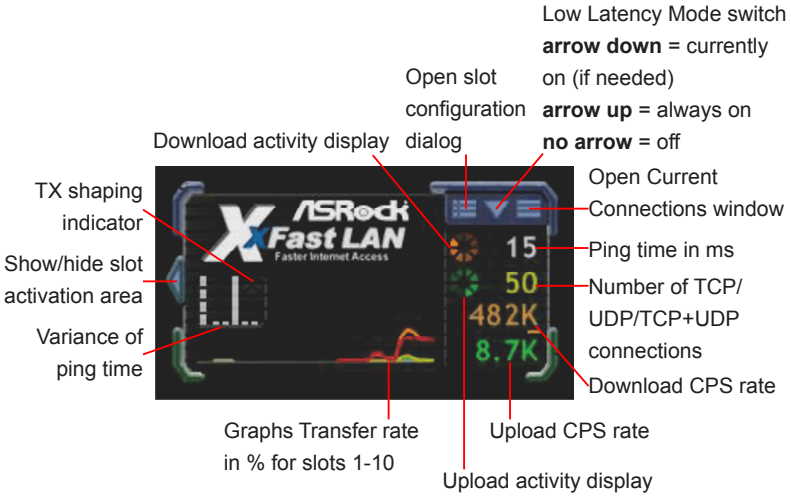
7.7 ASRock XFast LAN

ASRock XFast LAN provides several special features for faster internet access. For example, LAN Application Prioritization allows you to configure your application's priority ideally or add new programs to the priority list. Traffic Shaping helps you watch Youtube HD videos and download files simultaneously without hiccups. And in the status window there's Real-Time Analysis of Your Data so you can easily recognize the data streams you are transferring currently.


XFast LAN
Faster Internet Access
Lower Latency
In Game
Faster
5X
XFast LAN can lower latency in the game after setting online game priority higher.
Time latency in World of Warcraft: Cataclysm
*Lower is better
ASRock Motherboard with XFast LAN
Other Motherboard without XFast LAN

XFast LAN UI overview

The default status window



Right click for more options

Close Windows

Hides the status window. Can also be done by double clicking on the status window. Reopen by right clicking on the XFast LAN icon on the

bottom right and selecting **Open windows**.

Window settings

Users may configure the skin and effects of the user interface. Make the keyboard LEDs display Traffic Shaping information. Or display the XFast LAN status window on a Logitech gamer keyboard instead of Windows desktop.

Traffic Shaping

Traffic Shaping is used to optimize or guarantee performance, improve latency, and/or increase usable bandwidth for some kinds of packets by delaying other kinds of packets that meet certain criteria. In other words, it increases the speed while keeping the overall ping time low.

cFos Speed Test

Quickly test the upload and download speed of your Internet connection.

Speed Guide

This guide can either help you get the maximum out of your connection or solve problems with speed, ping time or connections.

Current Connection

Shows the details of current internet connections.

Usage Graph

Displays the Usage Graph.

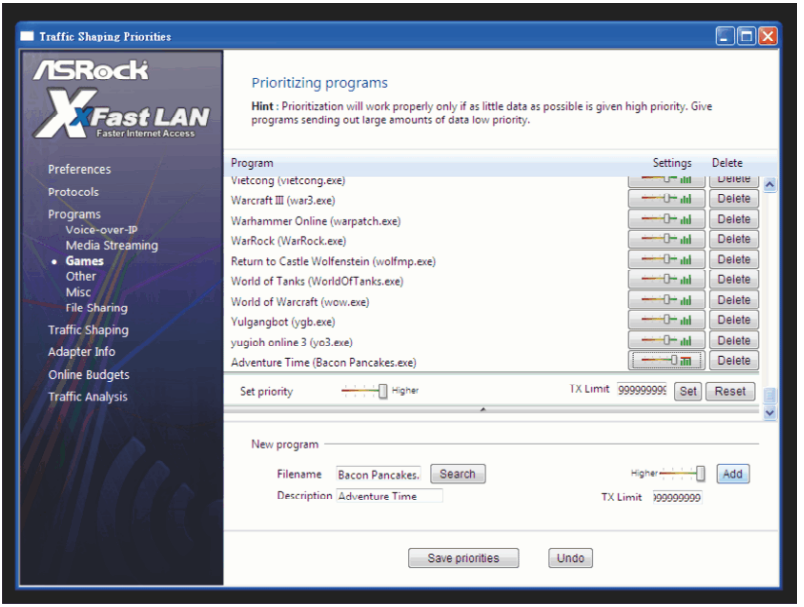
Options

Configure settings such as program prioritization, language and update the program.

Documentation

Opens detailed help for XFast LAN in a browser.

Adding a new application and changing its priority



Click search and choose a new program you wish to add. You can also type in a short description for the program.

Set the priority for the program and TX Limit then click Add to confirm.

Hit the switch button to change configurations or Delete to remove the application from the priority list.

7.8 Other Unique Features

ASRock Instant Flash

ASRock Instant Flash is a BIOS flash utility embedded in Flash ROM. This convenient BIOS update tool allows you to update system BIOS without entering operating systems first like MS-DOS or Windows®. With this utility, you can press the <F6> key during the POST or the <F2> key to enter into the BIOS setup menu to access ASRock Instant Flash. Just launch this tool and save the new BIOS file to your USB flash drive, floppy disk or hard drive, then you can update your BIOS only in a few clicks without preparing an additional floppy diskette or other complicated flash utility. Please be noted that the USB flash drive or hard drive must use FAT32/16/12 file system.

ASRock OMG (Online Management Guard)

Administrators are able to establish an internet curfew or restrict internet access at specified times via OMG. You may schedule the starting and ending hours of internet access granted to other users. In order to prevent users from bypassing OMG, guest accounts without permission to modify the system time are required.

ASRock Internet Flash

ASRock Internet Flash searches for available UEFI firmware updates from our servers. In other words, the system can auto-detect the latest UEFI from our servers and flash them without entering Windows® OS. Please note that you must be running on a DHCP configured computer in order to enable this function.

ASRock Dehumidifier Function

Users may prevent motherboard damages due to dampness by enabling “Dehumidifier Function”. When enabling Dehumidifier Function, the computer will power on

automatically to dehumidify the system after entering S4/ S5 state.

ASRock Fast Boot

With ASRock's exclusive Fast Boot technology, it takes less than 1.5 seconds to logon to Windows 8 from a cold boot. No more waiting! The speedy boot will completely change your user experience and behavior.

ASRock Restart to UEFI

Windows® 8 brings the ultimate boot up experience. The lightning boot up speed makes it hard to access the UEFI setup. ASRock Restart to UEFI allows users to easily enter the UEFI automatically when turning on the PC. Just simply enable this function; the PC will enter the UEFI directly after you restart.

ASRock Good Night LED

ASRock Good Night LED technology can offer you a better environment by extinguishing the unessential LED. By enabling Good Night LED in BIOS, the Power / HDD / LAN LED will be switched off when system is on. Not only this, Good night LED will automatically switch off Power and Keyboard LED when the system enters into Standby / Hibernation mode as well.

Chapter 8: UEFI SETUP UTILITY

8.1 Introduction

This section explains how to use the UEFI SETUP UTILITY to configure your system. The UEFI chip on the motherboard stores the UEFI SETUP UTILITY. You may run the UEFI SETUP UTILITY when you start up the computer. Please press <F2> or <Del> during the Power-On-Self-Test (POST) to enter the UEFI SETUP UTILITY, otherawise, POST will continue with its test routines.

If you wish to enter the UEFI SETUP UTILITY after POST, restart the system by pressing <Ctl> + <Alt> + <Delete>, or by pressing the reset button on the system chassis. You may also restart by turning the system off and then back on.

Because the UEFI software is constantly being updated, the following UEFI setup screens and descriptions are for reference purpose only, and they may not exactly match what you see on your screen.

8.1.1 UEFI Menu Bar

The top of the screen has a menu bar with the following selections:

Main	For setting system time/date information
OC Tweaker	For overclocking configurations
Advanced	For advanced system configurations
Tool	Useful tools
H/W Monitor	Displays current hardware status
Boot	For configuring boot settings and boot priority
Security	For security settings
Exit	Exit the current screen or the UEFI Setup Utility

8.1.2 Navigation Keys

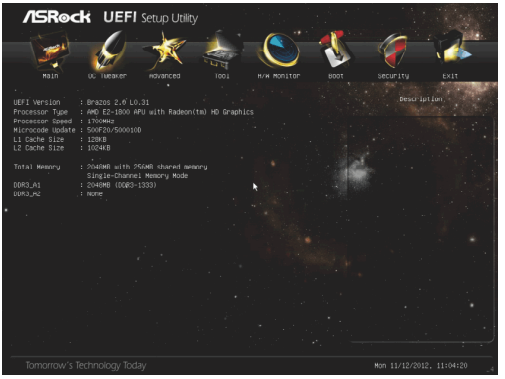
Use < ← > key or < → > key to choose among the selections on the menu bar, and use < ↑ > key or < ↓ > key to move the cursor up or down to select items, then press <Enter> to get into the sub screen. You can also use the mouse to click your required item.

Please check the following table for the descriptions of each navigation key.

Navigation Key(s)	Description
+ / -	To change option for the selected items
<Tab>	Switch to next function
<PGUP>	Go to the previous page
<PGDN>	Go to the next page
<HOME>	Go to the top of the screen
<END>	Go to the bottom of the screen
<F1>	To display the General Help Screen
<F7>	Discard changes and exit the SETUP UTILITY
<F9>	Load optimal default values for all the settings
<F10>	Save changes and exit the SETUP UTILITY
<F12>	Print screen
<ESC>	Jump to the Exit Screen or exit the current screen

8.2 Main Screen

When you enter the UEFI SETUP UTILITY, the Main screen will appear and display the system overview.



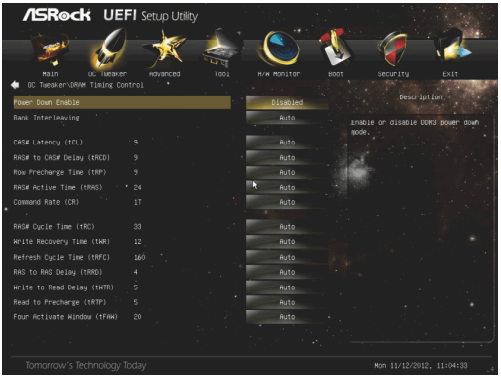
8.3 OC Tweaker Screen

In the OC Tweaker screen, you can set up overclocking features.

DRAM Timing Configuration

DRAM Frequency

If [Auto] is selected, the motherboard will detect the memory module(s) inserted and assigns appropriate frequency automatically.



Power Down Mode

Use this to enable or disable DDR power down mode.

Bank Interleaving

Interleaving allows memory accesses to be spread out over banks on the same node, or accross nodes, decreasing access contention.

DRAM tCL

Use this to change CAS# Latency (tCL) Auto/Manual settings. The default is [Auto].

DRAM tRCD

Use this to change RAS# to CAS# Delay (tRCD) Auto/Manual settings. The default is [Auto].

DRAM tRP

Use this to change Row Precharge Time (tRP) Auto/Manual settings. The default is [Auto].

DRAM tRAS

Use this to change RAS# Active Time (tRAS) Auto/Manual settings. The default is [Auto].

Command Rate (CR)

Use this to change Command Rate (CR) Auto/Manual settings. The default is [Auto].

RAS# Cycle Time (tRC)

Use this to change RAS# Cycle Time (tRC) Auto/Manual settings. The default is [Auto].

DRAM tWR

Use this to change Write Recovery Time (tWR) Auto/Manual settings. The default is [Auto].

DRAM tRFC

Use this to change Refresh Cyle Time (tRFC) Auto/Manual settings. The default is [Auto].

DRAM tRRD

Use this to change RAS to RAS Delay (tRRD) Auto/Manual settings. The default is [Auto].

DRAM tWTR

Use this to change Write to Read Delay (tWTR) Auto/Manual settings. The default is [Auto].

DRAM tRTP

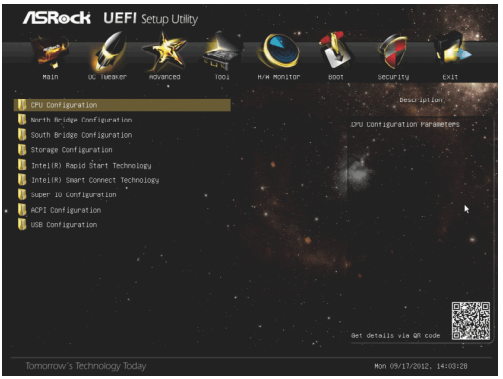
Use this to change Read to Precharge (tRTP) Auto/Manual settings. The default is [Auto].

DRAM tFAW

Use this to change Four Activate Window (tFAW) Auto/Manual settings. The default is [Auto].

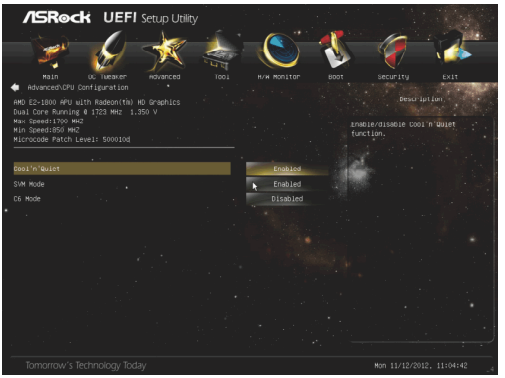
8.4 Advanced Screen

In this section, you may set the configurations for the following items: CPU Configuration, Nouth Bridge Configuration, South Bridge Configuration, Storage Configuration, Super IO Configuration, ACPI Configuration and USB Configuration.



Setting wrong values in this section may cause the system to malfunction.

8.4.1 CPU Configuration



Cool 'n' Quiet

Use this to enable or disable AMD's Cool 'n' Quiet™ technology. The default value is [Enabled]. Configuration options: [Enabled] and [Disabled]. If you install Windows® 7 / Vista™ and want to enable this function, please set this to [Enabled]. Please note that enabling this may reduce CPU voltage and memory frequency, and lead to system stability or compatibility issues with some memory modules or power supplies. Please set this to [Disabled] if these issues occur.

SVM

When this is set to [Enabled], a VMM (Virtual Machine Architecture) can utilize the additional hardware capabilities provided by AMD-V. The default value is [Enabled]. Configuration options: [Enabled] and [Disabled].

C6 Mode

Use this to enable C6 Mode. The default value is [Disabled].

8.4.2 North Bridge Configuration

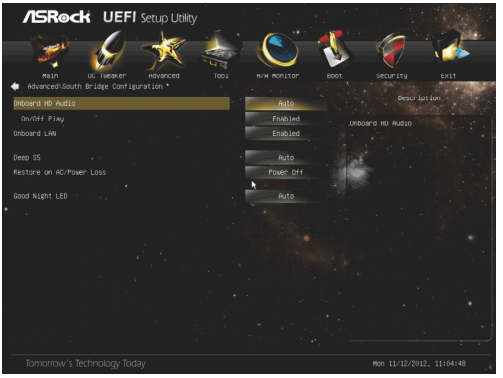
Share Memory

This allows you to configure share memory. The default value is [Auto].

Onboard HDMI HD Audio

This allows you to enable or disable the Onboard HDMI HD Audio.

8.4.3 South Bridge Configuration



Onboard HD Audio

Select [Auto], [Enabled] or [Disabled] for the onboard HD Audio. If you select [Auto], the onboard HD Audio will be disabled when a PCI Sound Card is plugged.

On/Off Play

Use this to enable or disable On/Off Play Technology. The default value is [Enabled]. When On/Off Play is enabled, Deep Sleep will be disabled. If you want to enable Deep Sleep, please disable On/Off Play first.

Onboard LAN

This allows you to enable or disable the Onboard LAN.

Deep S5

Mobile platforms support Deep S4/S5 in DC only and desktop platforms support Deep S4/S5 in AC only.

Restore on AC/Power Loss

This allows you to set the power state after an unexpected AC/power loss. If [Power Off] is selected, the AC/power remains off when the power recovers. If [Power On] is selected, the AC/power resumes and the system starts to boot up when the power recovers.

Good Night LED

Use this to enable or disable the Power LED and LAN LED.

8.4.4 Storage Configuration

SATA Controller

Use this to enable or disable the SATA Controller.

SATA Mode

Use this to select the SATA mode for SATA3_1 port. Configuration options: [IDE Mode] and [AHCI Mode]. The default value is [AHCI Mode].

AHCI (Advanced Host Controller Interface) supports NCQ and other new features that will improve SATA disk performance but IDE mode does not have these advantages.

SATA Aggressive Link Power Management

Use this to configure Aggressive Link Power Management.

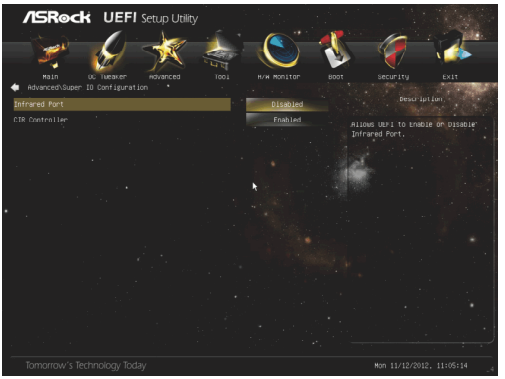
Hard Disk S.M.A.R.T.

Use this to enable or disable S.M.A.R.T. (Self-Monitoring, Analysis, and Reporting Technology).

Marvell SATA3 Operation Mode

Use this to select the SATA mode for SATA3_M0 and SATA3_M1 ports. Configuration options: [IDE Mode], [AHCI Mode] and [RAID Mode]. The default value is [RAID Mode].

8.4.5 Super IO Configuration



Infrared Port

Use this to enable or disable the onboard infrared port.

CIR Controller

Use this to enable or disable the CIR Controller.

8.4.6 ACPI Configuration

Suspend to RAM

Use this to select whether to auto-detect or disable Suspend-to-RAM. Select [Auto] to enable if the OS supports it.

Check Ready Bit

Use this to enable or disable Check Ready Bit.

ACPI HPET Table

Use this to enable or disable the ACPI HPET Table. The default value is [Enabled]. Please set this option to [Enabled] if you plan to use this motherboard to submit Windows® Vista™ certification.

Onboard LAN Power On

Use this to enable or disable the Onboard LAN to power on the system.

CIR Power On

Use this to enable or disable the CIR to power on the system.

RTC Alarm Power On

Use this to enable or disable the RTC (Real Time Clock) to power on the system.

USB Keyboard/Remote Power On

Use this to enable or disable the USB Keyboard/Remote to power on the system.

USB Mouse Power On

Use this to enable or disable the USB Mouse to power on the system.

CSM

Please disable CSM when Fast Boot is enabled. The default value is [Enabled].

8.4.7 USB Configuration

Legacy USB Support

Use this to select legacy support for USB devices. There are four configuration options: [Enabled], [Auto], [Disabled] and [UEFI Setup Only]. The default value is [Enabled]. Please refer to the descriptions below for details of these four options:

[Enabled] - Enables support for legacy USB.

[Auto] - Enables legacy support if USB devices are connected.

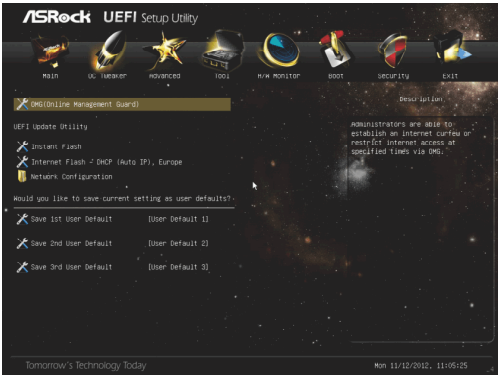
[Disabled] - USB devices are not allowed to be used under legacy OS and UEFI setup when [Disabled] is selected. If you have USB compatibility issues, it is recommended to select [Disabled] to enter the OS.

[UEFI Setup Only] - USB devices are allowed to be used only under UEFI setup and Windows / Linux OS.

Legacy USB 3.0 Support

Use this to enable or disable legacy support for USB 3.0 devices. The default value is [Enabled].

8.5 Tool



OMG (Online Management Guard)

Administrators are able to establish an internet curfew or restrict internet access at specified times via OMG. You may schedule the starting and ending hours of internet access granted to other users. In order to prevent users from bypassing OMG, guest accounts without permission to modify the system time are required.

Instant Flash

Instant Flash is a UEFI flash utility embedded in Flash ROM. This convenient UEFI update tool allows you to update the system UEFI without entering operating systems like MS-DOS or Windows® first. Just save the new UEFI file to your USB flash drive, floppy disk or hard drive and launch this tool, then you can update your UEFI only in a few clicks without preparing an additional floppy diskette or other complicated flash utility. Please be noted that the USB flash drive or hard drive must use FAT32/16/12 file system. If you execute Instant Flash utility, the utility will show the UEFI files and their respective information. Select the proper UEFI file to update your UEFI, and reboot your system after the UEFI update process is completed.

Internet Flash

Internet Flash searches for available UEFI firmware updates from our servers. In other words, the system can auto-detect the latest UEFI from our servers and flash them without entering Windows

OS. Please note that you must be running on a DHCP configured computer in order to enable this function.

Network Configuration

Use this to configure internet connection settings for Internet Flash.

User Defaults

You are allowed to load and save three user defaults according to your own requirements.

8.6 Hardware Health Event Monitoring Screen

This section allows you to monitor the status of the hardware on your system, including the parameters of the CPU temperature, motherboard temperature, fan speed and voltage.

CPU Fan 1 Setting

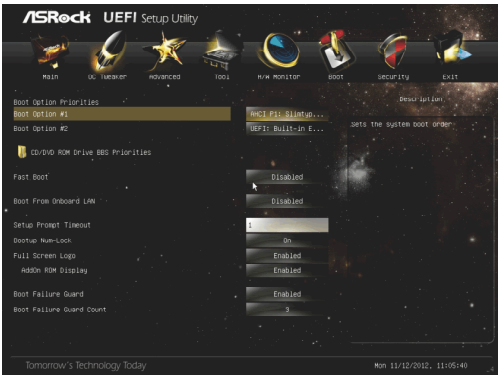
This allows you to set CPU fan 1's speed. The default value is [Automatic Mode].

CHA Fan 1 Setting

This allows you to set chassis fan 1's speed. The default value is [Automatic Mode].

8.7 Boot Screen

This section displays the available devices on your system for you to configure the boot settings and the boot priority.



Fast Boot

Fast Boot minimizes your computer's boot time. Configuration options:

[Disabled] - Disable Fast Boot.

[Fast]: When selecting "Fast", it is not allowed to boot from a USB storage device.

[Ultra Fast]: There are a few restrictions

1. Only supports Windows 8 UEFI operating system

2. You will not be able to enter BIOS Setup by using the keyboard. The only way to enter UEFI Setup is to clear CMOS or run the "Restart to UEFI" utility in windows.

3. If you are using an external graphics card, the VBIOS must support UEFI GOP in order to boot.

Boot From Onboard LAN

Use this to enable or disable Boot From Onboard LAN.

Setup Prompt Timeout

This shows the number of seconds to wait for the setup activation key. 65535(0xFFFF) means indefinite waiting.

Bootup Num-Lock

If this is set to [On], it will automatically activate the Numeric Lock

after boot-up.

Full Screen Logo

Use this item to enable or disable OEM Logo. The default value is [Enabled].

AddOn ROM Display

Use this option to adjust AddOn ROM Display. If you enable the option “Full Screen Logo” but you want to see the AddOn ROM information when the system boots, please select [Enabled]. Configuration options: [Enabled] and [Disabled]. The default value is [Enabled].

Boot Failure Guard

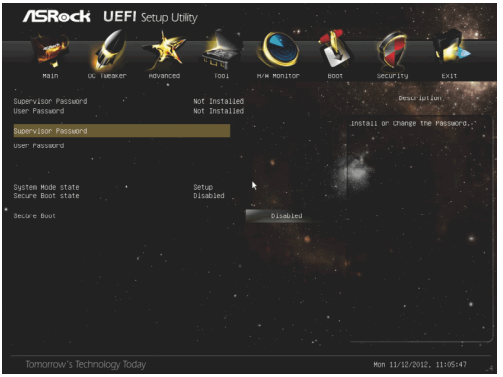
Enable or disable Boot Failure Guard.

Boot Failure Guard Count

Enable or disable Boot Failure Guard Count.

8.8 Security Screen

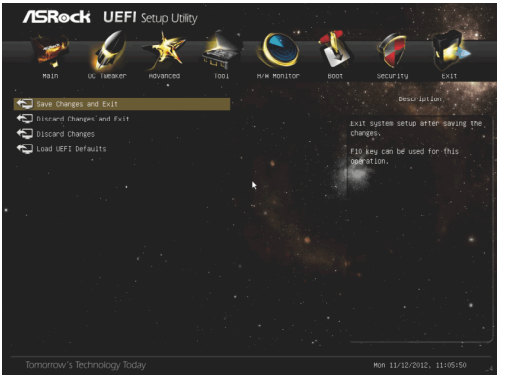
In this section you may set or change the supervisor/user password for the system. You may also clear the user password.



Secure Boot

Use this to enable or disable Secure Boot Control. The default value is [Disabled].

8.9 Exit Screen



Save Changes and Exit

When you select this option the following message, “Save configuration changes and exit setup?” will pop out. Select [OK] to save changes and exit the UEFI SETUP UTILITY.

Discard Changes and Exit

When you select this option the following message, “Discard changes and exit setup?” will pop out. Select [OK] to exit the UEFI SETUP UTILITY without saving any changes.

Discard Changes

When you select this option the following message, “Discard changes?” will pop out. Select [OK] to discard all changes.

Load UEFI Defaults

Load UEFI default values for all options. The F9 key can be used for this operation.

Chapter 9 Software Support

9.1 Installing an Operating System

This system supports various Microsoft® Windows® operating systems: 8 / 8 64-bit / 7 / 7 64-bit / XP / XP 64-bit. Refer to your OS documentation for more information.

9.2 Support CD Information

The Support CD contains necessary drivers and useful utilities that enhance the system features.

9.2.1 Running The Support CD

To begin using the support CD, insert the CD into your CD-ROM drive. The CD automatically displays the Main Menu if "AUTORUN" is enabled in your computer. If the Main Menu does not appear automatically, locate and double click on the file "ASRSETUP.EXE" in the Support CD to display the menu.

9.2.2 Drivers Menu

The Drivers Menu shows the available devices drivers if the system detects installed devices. Please install the necessary drivers to activate the devices.

9.2.3 Utilities Menu

The Utilities Menu shows the applications software that the system supports. Click on a specific item then follow the installation wizard to install it.

9.2.4 Contact Information

If you need to contact ASRock or want to know more about ASRock, you are welcome to visit ASRock's website at http://www.asrock.com; or you may contact your dealer for further information.